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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,242

05/04/2006

Ives Pellet

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OLIFF & BERRIDGE, PLC

P.O. BOX 320850

ALEXANDRIA, VA 22320-4850

EXAMINER

BELL, BRUCE F

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

06/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/578,242	Applicant(s) PELLET ET AL.	
	Examiner Bruce F. Bell	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/4/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Objections

1. Claim 6 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 6 does not limit the apparatus features of the instant claims. A recitation to the electric energy consumption of the cell is methodical in nature and does not limit the electrolytic cell in terms of features but instead attempts to do so with method of operating limitations.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 5-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Clements et al (6379525) .

Clements et al disclose an electrolyzer having a housing with an inlet and outlet at a common end. Within the housing are disposed electrode elements and a passageway that connects the inlet to the outlet. See abstract. The casing members are brought together to close the electrolyzer. Each casing member houses a flat, plate electrode element which are fastened to the casing member by means of non-conductive fastening elements. One casing has an outer rim and within this outer rim is

a gasket contained in shallow depressions, with these depressions being firstly in the outer rim and secondly in the face of the opposite casing member. See col. 2, lines 42-53. The casing member contains a lower fluid inlet and upper fluid outlet that has a lower anode terminal and an upper cathode terminal. The terminals are mounted through the wall portion of the casing member. The anode terminal is mounted through the wall to connect the terminal to the anode plate. The electrode element is a bipolar electrode opposite the anode plate. An upper cathode terminal connects with the cathode plate and is also has across the from the fluid passageway, an electrode element. This opposite, electrode element is a bipolar electrode. Other than the primary anode plate and the primary cathode plate, all electrodes are bipolar electrodes. See col. 2, line 63 – col. 3, line 13. A brine solution is introduced into the electrolyzer through the lower fluid inlet and passes through the fluid flow passageway between the electrode elements. A DC current potential is applied to the anode and cathode and provides DC current in a staggered path through the brine solution from the cathode downward to the anode. See col. 3, lines 21-32. Around the outside of the casing member is a peripheral groove for receiving a gasket member. One casing member has electrode elements and the other casing member has an anode plate. These electrodes are each affixed to the casing member by non-conductive fastening elements. One of the casing members has an outer rim that serves as a spacer, that upon closing of the casing members, the outer rim forms a space through which fluid flows between the electrodes. One casing member has a terminal connection aperture wherein an electrode terminal is inserted for fastening a lug connected to the anode plate. The electrode terminal has a post

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threaded at each end. The one set of post threads can tighten into the lug which itself is fastened onto the anode plate. The opposite threaded end of the post is for connection to a current lead. About the post, is a coupling element that is provided for securing the electrode terminal to the casing member. See col. 3, line 53- col. 4, line 12. Since each casing contains at least one bipolar electrode, the device yields enhanced hypochlorite generation. See col. 4, lines 17-21. For closing a pair of casing members, the pair can be hinged together on one edge similar to a door or book. The hinges may be conventional with pins for easy removal and so that they facilitate complete removal of one casing member from another. Other fastening means with quick release latches are also known as long as a tight closure during operation is achieved. See col. 5, line 63 – col. 6, line 10. A DC current is pressed upon the electrolyzer at a current rate of 50 Amperes, And the concentrated brine is passed through the electrolyzer at a flow rate of 5 gallons per minute. The brine solution enters the electrolyzer bottom and flows upwardly, to where sodium hypochlorite is generated. Under such operation, ten feet of head pressure is readily withstood without electrolyzer leakage. See Example.

The prior art of Clements et al anticipates the applicants instant invention as set forth above with respect to the instant claims as presented. The recitation in the instant claims with respect to the electrode plates being held in slits has been met by the area in each casing that the electrode plates are slide into and attached to, since the area is bounded on both ends by a part of the casing. The recitation in the claims with respect to the sliding the casing parts of the enclosure over the electrode plates is met by the closing of the bifurcated device of the Clements where in the two parts are slide

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together in a closing manner such as closing a book, wherein one part is moved towards the other. The recitation with respect to the weight of the cell appears to have been met by virtue of the cell size that is set forth in Clements et al. The formation of air bubbles is inherently met by virtue of the flow rates and the manner in which the fluid enters and exits the cell. Therefore, the prior art of Clements et al, anticipates the applicants instant invention as shown by way of the disclosure above with respect to the instant claims as presented.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clements et al (6379525) in combination with Pruette et al (20020069760).

Clements et al is as disclosed above in the 35 USC 102 rejection above.

Clements et al does not disclose the used of a plug and receptacle to interconnect the cells.

Pruette et al disclose insulated conductor cables that connect and electrically unite a plug and receptacle connector halves that are mounted on opposite end plates of each modular cell. The adjacent modular cells are fully nested together and plug sockets mate with receptacle pins to yield a contaminate free environment for cell to cell

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connections that are created within the inner walls of the connectors. A plurality of modular ionizer/collector cells are connected in a tier, so that an input power source is connected to the connector means on the first cell in the tier. See paragraph 0036.

The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the instant invention was made because even though the prior art of Clements et al does not disclose a plug and receptacle for the connector, it is known in the art to use such connectors when cells are connected in a modular configuration, in order to protect the connection and to yield a contaminate free environment for the cell connections. Therefore, one having ordinary skill in the art would be motivated to use such connection in the cell of Clements et al to protect the circuitry of the cell. Therefore, the prior art of Clements et al in combination with Pruette et al render the applicants instant invention as obvious for the reasons set forth above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 571-272-1296. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BFB
June 17, 2008

/Bruce F. Bell/
Primary Examiner, Art Unit 1795